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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,211	04/28/2005	Jaap Andre Haitsma	2167.007US1	7069

			EXAMINER
21186	7590	11/14/2006	ARANI, TAGHI T

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ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>13 April 2006</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-14</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-14</u> is/are rejected.

7) ☒ Claim(s) <u>9-11</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>28 April 2005</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Taghi T. Arani
Primary Examiner

[signature]
11/10/06

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>1/17/06, 4/13/06, 4/28/05</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-14 have been examined and are pending.

Claim Rejections - 35 USC § 112

2.   Claims 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Claim 4 recites " the number of differences between the fingerprint block". It is not clear

which "fingerprint block", the one selected or the one found in the database or between the one

found in the database and the one selected? .

Claim 4 recites the limitation "the number of differences" in line 2. There is insufficient

antecedent basis for this limitation in the claim.

Dependent claim 5 is also rejected by virtue of dependency.

Claim Rejections - 35 USC 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or

composition of matter, or any new and useful improvement thereof, may obtain a patent therefor,

subject to the conditions and requirements of this title.

3.   Claims 9 and 11 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claim 9 is not limited to tangible embodiment, a

computer program is not limited to tangible embodiment. As such, the claim is not limited to

statutory subject matter and is therefore non-statutory.

Dependent claim 11 is also rejected by virtue of its dependency.

Claim Objections

4.   Claims 9-11 are objected to under 37 CFR 1.75(c), as being of improper dependent form

for failing to further limit the subject matter of a previous claim (s). Applicant is required to

cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or

rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claims 1-3, 6-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Oostveen et

al. (IDS filed 04/13/2006, "Feature Extraction and a database Strategy for Video Fingerprinting",

hereinafter "Oostveen").

As per claim 1, Oostveen discloses a method, computer program, record carrier and an

apparatus of matching a set of input fingerprint blocks, each fingerprint block representing at

least a part of an information signal, with fingerprints stored in a database that identify respective

information signals, the method comprising the steps of (Fig. 3 and associated text, see also page

119, section 1.3 Fingerprinting Approaches abstract):

selecting a first fingerprint block of said input set of fingerprint blocks (page 124, under

section 3 Database Strategy, where "matching the extracted fingerprints to the fingerprints in a

large database is disclosed);

finding at least one fingerprint block in said database that matches the selected

fingerprint block (bottom of page 125 bridging into page 126, where a determination is made as

to whether or not all 30 sub-fingerprint (i.e. a selected fingerprint block) match one of the

candidate clips and positions);

selecting a further fingerprint block from said set of fingerprint blocks at a predetermined

position relative to said first selected fingerprint block (page 126, first paragraph, 2nd paragraph,

discloses that when the LUT in the database points only in certain position in clip 1, bit error rate

between the extracted fingerprint block and the block of song 1 from position p-29 until position

p is calculated) ;

locating at least one corresponding fingerprint block in said database at the predetermined

position relative to said found fingerprint block (page 126, first paragraph, 2nd paragraph,

discloses two possible candidate positions, one in clip 2 and one in clip 1); and

determining if said located fingerprint block matches said selected further fingerprint

block (same paragraph, discloses that if that if the bit error rate between the extracted fingerprint

block and the corresponding database fingerprint block of clip 2 yields a bit error rate below the

threshold, the video clip is identified as originating from clip 2).

As per claim 2, Oostveen discloses a method as claimed in claim 1, the method further

comprising iteratively repeating the steps of selecting a further fingerprint block, locating a

corresponding fingerprint block in said database and determining if said located fingerprint block

matches said selected further fingerprint block for different predetermined positions relative to

the first selected fingerprint block (page 126, second paragraph, discloses that if clip 2 is not

identified as originator of the video clip , the same procedure is repeated for the remaining 28

sub-fingerprints).

As per claim 3, Oostveen discloses a method as claimed in claim 1, wherein said

predetermined position is an adjacent position (page 125, where it is disclosed that entries in the

lookup table points to multiple positions in multiple clips and that the pointers are stored in a link

list, see also page 126, where candidate positions are one in clip 2 and one in clip 1)

As per claim 4, Oostveen discloses a method as claimed in claim 1, wherein a match in

said finding step is deemed to have occurred if the number of differences between the fingerprint

block is below a first threshold, and a match in said determining step is deemed to have occurred

if the number of differences between the fingerprint blocks is below a second threshold.

As per claim 6, Oostveen discloses a method as claimed in claim 1, further comprising

the steps of:

receiving an information signal; dividing the information signal into sections (pages 122

123, steps 1-3); and

generating said input block by calculating a fingerprint block for each section (Fig. 1,

differential block luminance algorithm and associated text, pages 122-123, steps 1-3).

As per claim 7, Oostveen discloses a method of generating a logging report for an

information signal comprising the steps of:

dividing the information signal into similar content segments(pages 122

123, steps 1-3);

generating an input fingerprint block for each segment(Fig. 1, differential block

luminance algorithm and associated text, pages 122-123, steps 1-3); and

repeating the method steps as claimed in claim 1 so as to identify each of said blocks

(see rejection of claim 1 above).

As per claim 8, Oostveen discloses a method as claimed in claim 7, wherein said

information signal comprises an audio signal, and wherein each segment corresponds to at least a

portion of a song (page 127, second paragraph).

Claims 9 and 12 are computer program an apparatus corresponding to method claim

claims 1 . Claims 9 and 12 are rejected for the same reasons provided in the statement of

rejection of claim 1.

Claims 10-11 are a record carrier and a method of making corresponding to claim 9.

Claims 10-11 are rejected for the same reasons provided in the statement of rejection of claim 9.

As per claim 13, Oostveen discloses an apparatus as claimed in claim 12, further

comprising a database arranged to store fingerprints identifying respective information signals

and meta-data associated with each signal (Fig. 3 and associated text, i.e. Database Layout, see

also page 124, section 3 Database Strategy, page 120, section 2 Feature Extraction).

As per claim 14, Oostveen discloses an apparatus as claimed in claim 12, further

comprising a receiver for receiving an information signal, and a fingerprint generator arranged to

generate said set of input fingerprint blocks from said information signal (pages 122-123, steps 1-3).

Note: Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Conclusion

6.   Prior arts made of record, not relied upon:

US 20040028281 to Cheng et al.

US 2004/0172411 to Herre et al.
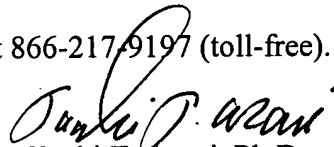
US 2003/0023852 to Wold

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Taghi T. Arani, Ph.D.
Primary Examiner
Art Unit 2131
11/10/2006